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ABSTRACT

A language evaluation instrument was devised to assess the accuracy of program implementation by teachers of four Australian preschool programs. The Teacher Language Instrument (TLI) categorizes each verbal episode of a teaching interchange for both mode and function. Five general mode categories of teacher language behavior--statements, questions, imperatives, reinforcers, and facilitators--were differentiated. Similarly, five general categories of function--regulatory, heuristic, social, administrative and resource--were developed. Evaluation data were collected on videotape and the classroom events were sampled using a combination of event- and time- sampling procedures. Except for ad hoc recording of all especially significant events, samples of teacher speech were recorded every 15 minutes. The verbal interactions of all four teachers at each school studied were recorded in 10 minute segments. It was found that the four programs were implemented along intended guidelines. Among the results, teachers in the Cognitive and Competency Programs used the questioning mode more frequently than the stating mode, while for the Behaviorist and Contemporary Programs the opposite order occurred. Across all four programs the functions occurred in descending order as follows: regulatory, heuristic, social, resource and administrative. Definitions of mode and function categories, as well as tables depicting percentage of observations by language category and site, are appended. (Author/RH)

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MT DRUITT EARLY CHILDHOOD PROJECT

SCHOOL OF EDUCATION
MACQUARIE UNIVERSITY
NORTH RYDE
AUSTRALIA., 2113.

PROJECT EVALUATION REPORT

AN ANALYSIS OF PRESCHOOL TEACHERS'

CLASSROOM LANGUAGE

Jillian Belme & Anne Gray

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NUMBER 3

DATE May, 1980

Preface

This report presents an analysis of the classroom language of preschool teachers.

The language of teachers has important effects on the cognitive interactions and the effective climate of the classroom. The performance of teachers in the classroom has been studied extensively, and the present research deals particularly with the form and the effects that teacher language has in the preschool classroom.

This is the first of two reports dealing with the study of teacher language within the programs offered by the Mt Druitt Early Childhood Project. The second report deals with the language of Year One teachers.

Professor Hugh Philp
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Introduction

The Teacher Language Instrument (T.L.I.) is a process instrument devised as part of the evaluation activities of the Mt Druitt Early Childhood Project. This is a major early childhood project attempting to assess the effects five different early childhood programs have on the children enrolled in them. For these effects to be stated with confidence, the implementation of the programs as stated in their objectives must be verified. The T.L.I. was designed to provide evidence that four of the programs were implemented accurately. * Large scale evaluation projects such as Head Start Planned Variation and Follow Through developed comprehensive observational systems used to record classroom processes of all programs regardless of their theoretical orientation (Miller, et al., 1970, Stallings, 1975). However, because classroom interactions are complex, no system which allows researchers to make all essential judgments has yet emerged (Dunkin & Biddle, 1974). The increase in educational research activity has led to the emergence of many classroom observation systems many of which have been only used to evaluate their target program.

This situation leaves the researcher designing a classroom observation system in a dilemma. A broad system looking at classroom events as a whole, particularly if it is a category system, may give only superficial judgments which may not point out all essential differences between programs. On the other hand, a detailed system may prove difficult to implement and to use reliably.

The present research task called for an instrument that would give some insight into the subtleties of classroom events. The nature of the main interactions in the classroom and general classroom climate were assessed by the PROSE, a category system scored directly in the classroom. The T.L.I. was designed as a specimen-description approach using videotape recordings to provide a description of teacher language in each of the four programs (Gordon & Jester, 1973). It was intended that the T.L.I. would provide a detailed analysis of teacher language which would supplement information yielded by the PROSE and highlight differences among the programs.

Review of Research

As the number of experimental preschool programs increases, it is becoming evident that teacher variables are the single most important factor in ensuring the successful implementation of a particular program. Therefore, there is good reason to focus on teacher behaviour more closely, so that the teaching/learning process is better understood. Some researchers claim that process variables influence learning more than any "reordering or restructuring of the curriculum in the classical sense" (Simon & Boyer, 1968).

* The T.L.I. was not used to assess the Home Base Program because it was not appropriate to that setting. The implementation of the four centre-based programs (i.e., the Behaviourist, Cognitive, Competency and Contemporary Programs) was assessed using the T.L.I.

In particular, teachers' classroom verbal interactions represent complex processes and are the vehicle for much of the transmission of information in a classroom. It seems worthwhile, therefore, to try to uncover the subtleties that linguistic messages carry in a classroom so that teaching/learning process might be more fully described.

a) Classroom Observation Instruments

Most of the classroom instruments presently available are grouped as being either 'affective' or 'cognitive' (Simon & Boyer, 1968). 'Affective' instruments deal with emotional climate of the classroom by coding how the teacher reacts to the feelings, ideas, work efforts or actions of the pupils. 'Cognitive' instruments consist of categories which differentiate between kinds of teaching information, e.g., teacher questioning and pupil responses.

Observation systems have been used to give feedback to teachers about their own teaching behaviours and the effects of those behaviours on the quantity and quality of pupil participation in the classroom. The Verbal Interaction Category System (VICS) (Amidon & Hunter, 1966) and the Flanders System of Interaction Analysis (Flanders, 1966) were basic and influential in this field. Both of these systems, particularly that of Flanders, have been widely used in research. The kind of information produced is useful for discovering more about classroom processes within the limits of the broad categories comprising these instruments. Both systems distinguish major categories of teacher-initiated talk, e.g, gives information, gives direction, asks narrow question, asks broad question. When the teacher is answering an initiative of a pupil, the response is classified as accepts or rejects. The Flanders system, which has seven categories of teacher talk, allows the researcher to distinguish teacher utterances which have indirect influence, i.e., accepts feeling, praises or encourages, accepts or cues ideas of student, asks questions; and those which have direct influence, i.e. lecturing, giving direction, criticising or justifying authority.

The present research task required a more detailed instrument dealing with teacher's language alone. However a comprehensive review indicated that very few instruments available concentrated solely on this aspect. Most look at both teacher and student behaviour, usually in attempts to link classroom process variables to pupil product measures (Katz, 1968; Miller, et al., 1970) or to relate teacher process variables to pupil process variables (Spaulding, 1969). Only three instruments concentrated on teacher language alone (Joyce, 1966; Miller, 1966; Withall, 1949) and the subsequent paragraphs outline their characteristics.

The Social-Emotional Climate Index (Withall, 1949) is a very early work in the field and provides information on the social-emotional climate being induced by the teacher. Category descriptors included interpretative comments to assist in the coding of utterances. Teacher's verbal behaviours were at least partially differentiated by the dominant intent of the utterances Two other systems, the Joyce System (Joyce & Hodges, 1966) and the Teaching Behavior in Pupil-Teacher Interaction (Miller, 1966) are predominantly cognitive systems which have broad categories for classifying utterances in terms of teaching activity, e.g., sanctions, handling information, etc. Important contextual information is also recorded by these instruments, e.g., the roles adopted by teachers and pupils in any particular interaction.

While these systems had attractive features, they were not suitable for the present research. Firstly, their categories were too general to yield the detailed type of data required. Secondly, their organisation and emphasis was often inappropriate to conditions and events in a preschool setting. It was decided to devise an instrument from a body of research, which focussed on a linguistic analysis of classroom interaction, and in particular teachers' language.

b) Linguistic Analyses of Teacher Behaviour

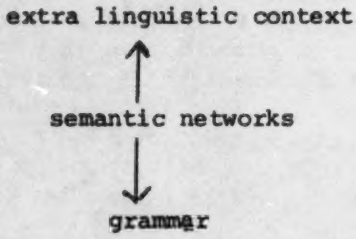
It has long been recognised that the classroom is a linguistic context and that many judgments about the behaviour of teachers are based on what teachers say. However, few researchers have assessed teacher language in a qualitative way. Detailed linguistic analyses of teacher language were given new impetus by the contribution of the transformational grammarians which provided more flexible tools for language description (Chomsky, 1965). More sensitive issues were revealed by the thesis that the language of various groups differs in systematic ways (Bernstein, 1972; Labov, 1968). Bernstein's research indicates that an 'elaborated' code which is characterised by a more complex syntax and more precise reference, is more suited to abstract reasoning than a 'restricted' code which lacks these features. The school context moreover, is characterised by teachers who use an elaborated code and expect pupils to communicate in it. Some groups, in particular working class children and black children in the U.S., are disadvantaged by the mismatch of language systems used at school and in their homes. (cf Labov, 1968). The effect of this situation on the achievement of these children in a standard school setting is obvious.

A recent review of studies analysing the linguistic features of teacher language reveals the development of emphases in the field (Dunkin & Biddle, 1974). Some studies deal with an analysis of specific teacher language behaviours such as explaining (Hiller, Fisher & Kaes, 1969), while others examine broad linguistic contexts (Cambourne, 1971). More relevant to the present research, was a scale developed to examine the behaviour of teachers and caretakers in residential nurseries (Tizard, et al., 1976). This instrument did have useful categories describing teacher (or caretaker) speech. Other systems designed to provide a linguistic analysis of teacher/pupil discourse have also emerged (Sinclair & Coulthard, 1975). While all these studies have something to offer and provide a rich background of information, the T.L.I. begins with a different theoretical base and attempts to analyse all instances of teacher language for both mode and function.

Theoretical Bases of the T.L.I.

Many of the notions incorporated into the categories of the T.L.I. have been derived and explained in the linguistic research of Halliday (1973). To Halliday, language is seen as 'meaning potential' and language forms represent the speaker's choice of tools in realising the meaning intended. At the semantic or 'input' level, the speaker has the potentiality for describing events, behaviours, ideas, in language. At this point two other factors become relevant to a full interpretation of the speech event: the social situation on the one hand and the grammatical system of the language on the other. This

relationship can be represented



The extra linguistic context becomes an integral part of any communication in that it influences the choice of linguistic form used and adds meaning to forms used in communication. Halliday identifies two types of contexts: the social and situational contexts. The social aspects of language include the establishment and maintenance of the individual's social roles, the establishment of familiarity and distance, types of personal interaction and so on. In situational settings, language is used to establish the structures governing the behaviour of the participants as in transaction of various kinds, e.g., tasks, games, discussions.

These sociological underpinnings are necessary for an understanding of functions of language, since all verbal communication takes place in a social context. The classroom is a social environment, where certain relationships and activities are initiated and maintained by the use of language. It certainly has the features of a situational context, and over time would incorporate the more generalised social aspects of language, e.g., as in adult/child or child/child interactions.

Within these settings, language can be viewed as serving two quite distinct 'macro functions' - the ideational and interpersonal functions (Halliday, 1973). Briefly, the ideational function is language used for the expression of content, while the interpersonal function encompasses the expression of comments, attitudes and evaluations. Most importantly, the interpersonal function reveals the role the speaker adopts vis-a-vis the listener in the language forms used, e.g., as in informing, questioning, greeting, persuading.

The functional theory of language put forward by Halliday has meaning at its core. It is concerned with all features, contextual and linguistic which influence the way in which meaning is conveyed. Most importantly, it establishes a broader sociological perspective of language use and makes a more detailed examination of individual uses of language possible.

Other researchers have used the idea of functions of language to examine and code the spontaneous speech of teachers and children in the classroom (Tough, 1974). Learning to use language to express a wide range of intentions, feelings, desires, was seen as an important goal for language development for the preschool age group. Consequently, analysis of both teachers' and children's language in terms of function can be a useful diagnostic for planning learning experiences for individual children.

Description of the Teacher Language Instrument

The T.L.I. is an observation instrument which categorises each verbal episode of a teaching interchange for both mode (i.e. linguistic behaviour) and function (i.e. meaning or affect). This form of coding was decided upon because it best suited the

intended use of the data within the Project's evaluation model. At the most theoretical level, this procedure is not desirable, because it ignores the quality of coherence which all language texts have. Moreover, a single construction may have more than one function (Halliday, 1973). Practically, however, the procedure does permit a more detailed description of teacher language than has been so far attempted.

The Mode of a Verbal Episode

As the instrument was originally conceived, the mode of the verbal episode was defined by its grammatical form, e.g., statement, question, command. This definition meant that much important information was lost because essential features of teaching interchanges were oversimplified. It was not completely possible to separate the form of an utterance from its context. Different types of questions, for example, could be distinguished by the type of response the teacher expected, e.g., "Yes/no," or an elaborated answer. This is a legitimate basis for distinction because the kind of response sought will influence a teacher's selection of question form.

Other researchers in the field had faced similar difficulties in devising observation instruments. These experiences assisted in defining the mode categories for the T.L.I. For example, the stating mode differentiates between statements which deal with the use of materials (show) and statements which convey verbal information only (Stallings, 1975). Similarly, the questioning mode has the category of socratic question which encompasses the syntactic category of wh- question. Socratic questions are those which the teacher employs to assist the child in solving a problem or clarifying his ideas (Tizard et al., 1976).

There are five general mode categories of teacher language behaviour, i.e. statements, questions, imperatives, reinforcers and facilitators. These mode categories were subdivided into specific language behaviours. (see Figure 1).

The Function of a Verbal Episode

Categories in the function dimension, aim to describe the major effect or impact an utterance has or is intended to have. The notion of functions in language is important in descriptions of language which are sociologically based. The language functions used in the T.L.I. however, were developed from those of Halliday (1973). The language functions devised by Halliday were developmental, i.e., they evolved from an attempt to describe the stages by which children acquired language (see Appendix A for list). Observation at the preschool sites demonstrated that exclusive categories for adult language could not be formed from these basic functions. In particular, the language of instruction itself could not be defined under one functional category. For example, teachers used the language of instruction for regulatory and heuristic functions. This led to an expansion and refinement of the regulatory and heuristic functions. This was the major modification of the original set of functions. The instrumental function, while a developmentally important one for young children's language, did not feature in the language of adults, and was deleted from the final form of the instrument.

There were five general categories of function, i.e. regulatory heuristic, social, administrative and resource. These were further subdivided and in the final form, 6 of the 7 functions defined by Halliday are incorporated. Others such as motivate, evaluate, administrative and resource, developed from a need to describe functions specific to the teaching context (see Figure 1). A complete description of all categories can be found in Appendix B.

Following trial sessions in preschools in which all ongoing teacher verbal behaviour was coded, the mode and function categories were mapped onto a single matrix, so that any verbal episode could be coded for both mode and function (see Figure 1).

Collection of Data

The data were collected on videotape at the four preschool sites during July, 1977. Sound quality was ensured by the use of radio microphones. The events of the day were sampled using a mixture of event and time-sampling procedures. Samples of teacher speech were recorded every fifteen minutes during the day, with the provision for the collection of extra data should a significant event occur between time-sampling periods. All four teachers at each school were video-recorded and their verbal interactions were recorded in 10 minute segments. All contexts prescribed by the programs, e.g., small group/large group/individual interactions were taped. The effect of different specified teaching imposed by curricula on teachers' language could then be assessed. Mid-year taping was chosen because programs had been fully implemented, and because there were no other research activities going on at that time.

Analytic Procedures

The data were scored directly from the videotape. The unit of analysis was the verbal episode. Two pieces of information were recorded for each verbal episode: mode and function. The boundaries of verbal episodes were marked according to various criteria, which were developed from an examination of transcripts of videotapes. A new episode began

i) after a change in mode and/or function, e.g., when an explanation follows a command or statement;

(ii) with a new utterance, i.e., one that adds information, and no change in mode and function, e.g., as in a series of discrete pieces of information, or a series of clauses joined by 'and'.

Incomplete or inaudible utterances were not scored.

FUNCTION

	REGULATORY				HEURISTIC			SOCIAL						
MODE	Motivation	Instruct	Control	TOTAL Regulatory	Evaluation	Knowledge	TOTAL Heuristic	Social Interaction	Personal	Imagine	TOTAL Social	ADMINISTRATIVE	RESOURCE	TOTAL
STATING														
Show														
Tell														
Lead														
TOTAL Stating														
QUESTIONING														
Simple														
Open														
Socratic														
TOTAL Questioning														
ELICITING														
Command														
Request														
Recognition														
TOTAL Eliciting														
REINFORCING														
Gen. Praise														
Spec. Praise														
Negative														
TOTAL Reinforcing														
FACILITATING														
Affirmative														
Response														
TOTAL Facilitating														
TOTAL														

Figure 1 TEACHER LANGUAGE INSTRUMENT

Results

The data were analysed using the SPSS Condescriptive program so that a percentage breakdown of the different teacher verbal behaviours and functions could be examined for each program. The percentages of all categories and sub-categories for both mode and function for all four programs are set out in Appendix C. The percentage data were then ranked in terms of total percentage on the broad categories of mode and function and the ranks compared across programs (see Table 1).

The similarity in the ranks of the broad categories show that the verbal behaviours of the teachers in the four programs were consistent in terms of proportions of language behaviour occurring in the teaching/interaction time available to them.

Teachers in the Cognitive and Competency programs used the questioning mode more frequently than the stating mode, while for the Behaviourist and Contemporary programs the opposite order occurred. For the Cognitive program this reflects the teaching style that teachers are encouraged to adopt. For the Competency program, evaluation of the children's skill in various competencies was an integral part of the teacher's role during the day. Apparently questioning was one verbal technique used by teachers to assess children's knowledge and abilities.

Teachers in the Contemporary program tended to elicit rather than facilitate responses from the children, although the difference was not large. This outcome may be a result of the emphasis the program placed on allowing children to explore the environment as free from adult intervention as possible. Intervention may therefore only come at a time when a direct, quick result is necessary, hence the use of an eliciting technique ahead of a facilitating one.

TABLE 1: Ranks of Broad Categories of the T.L.I. for the Four Programs

RANK	PROGRAM			
	BEHAVIOURIST	COGNITIVE	COMPETENCY	CONTEMPORARY
A. MODE				
1.	Stating (33.04%)	Questioning (31.48%)	Questioning (32.43%)	Stating (35.87%)
2.	Questioning (24.97%)	Stating (29.05%)	Stating (27.09%)	Questioning (26.30%)	
3.	Facilitating (18.13%)	Facilitating (21.83%)	Facilitating (18.89%)	Eliciting (19.08%)
4.	Eliciting (14.30%)	Eliciting (13.97%)	Eliciting (18.22%)	Facilitating (16.27%)
5.	Reinforcing (9.48%)	Reinforcing (3.54%)	Reinforcing (3.01%)	Reinforcing (3.20%)
B. FUNCTION				
1.	Regulatory (47.64%)	Regulatory (44.80%)	Regulatory (44.25%)	Regulatory (41.13%)
2.	Heuristic (32.83%)	Heuristic (37.65%)	Heuristic (38.93%)	Heuristic (32.16%)
3.	Social (15.66%)	Social (13.8%)	Social (13.33%)	Social (21.63%)
4.	Resource (3.27%)	Resource (3.45%)	Resource (2.26%)	Resource (3.81%)
5.	Administrative (0%)	Administrative (0.55%)	Administrative (0%)	Administrative (1.45%)

The order for the rate of occurrence of functions were regulatory, heuristic, social, resource and administrative across all four programs. Between 40% and 50% of utterances served a regulatory function, and heuristic behaviour accounted for 33% to 40% of utterances. Utterances with a social function made up from 13% to 22% of total utterances, at individual sites.

More interesting program differences are revealed by comparing the frequency of behaviours in the subcategories of the instrument (see Appendix C).

The most interesting category in the mode section of the instrument was the questioning category because this category divided the programs and revealed significant teaching style differences. Teachers in the Cognitive program asked many more open questions (22.90%) than simple questions (7.07%), and they asked more open questions than teachers in the other programs (see Appendix C). While teachers in the Competency program asked as many questions as teachers in the Cognitive program, their responses were more evenly divided between open questions (17.76%) and simple questions (12.99%). Teachers in the Contemporary program divided their questioning behaviour evenly between simple (13.99%) and open (11.45%). Socratic questioning was infrequent in all programs, but was slightly higher in the Cognitive than in the other programs.

In the reinforcing mode, teachers in the Behaviourist program provided more instances of both general and specific praise than teachers in all the other programs.

In the pattern of functions shown in teachers' speech, the Contemporary program differs from the other programs along two major dimensions. Firstly, not only were teachers in the Contemporary program slightly less regulatory than teachers in the other three programs (see Appendix C), but they used different means to regulate the behaviour of children. They tended to control (17.98%) and motivate (14.93%) and they instructed less (8.22%). The low incidence of instruct is consistent with program goals, which specify that teachers should allow children to use materials in a variety of ways and encourage children in divergent behaviours. They used language to exercise a control function more than teachers in other programs. The control category encompassed a wide range of meanings; for example, from giving choices to commanding. Giving choices is an appropriate activity for teachers in the Contemporary program, and further reference will need to be made to the context of the interaction to determine the emphasis in regulatory strategies for these teachers.

Teachers in the Behaviourist and Cognitive program showed a different pattern of language which had the function of regulating children's behaviour (See Appendix C). Their main strategy was motivation, followed by instruction and then control. In the case of the Behaviourist teachers, the motivate function accounted for 50 percent of all regulatory behaviours. Perhaps these teachers found motivation a useful supplementary technique to reinforcement as a means of shaping children's behaviour.

The second way in which teachers in the Contemporary program differed from other teachers was in the frequency of language used within the social function of the T.L.I. (see Appendix C). 13.83 percent of teacher verbal episodes fulfilled a social interaction function compared with Competency (5.79%), Cognitive (6.2%) and Behaviourist (9.4%). The Contemporary program had specific and important goals in the area of the children's social development which is reflected in the language behaviours of the teachers.

The pattern for the heuristic function was similar across all programs, in that all teachers used evaluation for heuristic purposes much more often than the input of information or knowledge function. Teachers in the Cognitive (32.0%) and Competency (31.53%) programs used the evaluative function more often than teachers in the Behaviourist (24.52%) and Contemporary program (25.52%). This information complements the patterns of response for the questioning mode, and in the case of the Cognitive program this is a significant program variable. It is interesting information about the development and implementation of the Competency program, which did not specify any particular style of interaction for its teachers.

Discussion

The TLI was designed to assess the language behaviours of teachers implementing four programs of different curriculum orientation. At one extreme, the Contemporary program was flexible in regard to teaching styles, emphasising that children regulate their own learning experience while the Behaviourist program specified teaching routines and curriculum content. The Cognitive program builds its curriculum around Piagetian theories and extrapolates its teaching strategies from it, while the Competency program emphasises developing school-related competencies and pro-social behaviours in the children, but does not specify teaching style.

The data were presented as a comparison of the frequency of occurrence of teachers' verbal episodes in both mode and function across the four programs The following findings were reported for each program.

1. The Behaviourist teachers used motivation more than reinforcement as a technique for shaping the behaviour of the children. The regulatory function accounted for almost 50% of their total utterances.

2. The Cognitive program data revealed a strong questioning strategy in the language of its teachers. In particular, open questions, which encourage divergent responses from the children was a feature. These teachers also showed a strong tendency to evaluate the children through verbal interaction.
3. Teachers in the Competency program developed a pattern of language mode and function similar to that shown by the Cognitive teachers. They used the questioning mode more than the stating mode, used the evaluative function more often than teachers in the other program.

4. The language behaviour of the Contemporary teachers presents a different pattern in the use of functions from teachers in the other programs. They instructed very little, but regulated children's behaviour through motivation and control. Teachers in the Contemporary program also used language to serve a social function, particularly that of promoting social interaction.

While further analysis is necessary to uncover the subtleties of verbal interaction in the classroom, the findings uncovered by this study indicate that the four programs were implemented along intended guidelines. These differences are reflected in the language of the class teachers, when considered according to mode and function. The T.L.I. served its purpose as an instrument which would look at program differences in teacher language.

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APPENDIX A

THE FUNCTIONS OF LANGUAGE USED BY CHILDREN

Source: M. A. K. Halliday
'Explorations in the Functions of Language'

1.	Instrumental Function:	Language used to obtain satisfaction of material needs.
2.	Regulatory Function:	Language used to regulate the behaviour of others.
3.	Interactional Function:	The use of language in the interaction between the self and others.
4.	Personal Functions	The use of language to promote one's individuality and to express feelings and attitudes.
5.	Heuristic Function:	The use of language as a means of investigating reality, a way of learning about things.
6.	Imaginative Function:	The use of language by the child to create his own environment e.g. a 'pretend' world a world of language play.
7.	Representational Function	The use of language to communicate a message which has specific reference to the processes, persons, objects, abstrations, qualities, states and relations of the real world around him.

APPENDIX B

A. Mode of Verbal Episodes

1. The Stating Mode:

The Stating Mode categorises verbal behaviours which pass on new information or affirm that a certain body of information is known.

SHOW: Showing behaviours relating to the use of concrete materials are coded as 'show'. The utterance may aim to demonstrate, illustrate, inform, arouse curiousity, explain, or promote understanding with the aid of materials. These statements may also be used to facilitate or elaborate the child's use of materials - e.g. block building, puzzles, felt board activities, etc.

'Bounce the ball like this/'
'These are circles/ they are all different sizes/ * some are very big/'
'This hand holds the shape down on the table/ see how I have drawn right around the outside of it/'

TELL: Utterances which pass on information are coded as 'tell'. These may include narration or explanation. The interaction, however, does not include the use of materials.

'I'll be collecting them in a while/'
'Flowers grow everywhere/there are many different kinds of flowers/'
'I'm still waiting for two or three people/'
'Jillian is going to be doing chalk painting/ wet chalk painting for drawing/ and I am going to do special things with the girls and boys in my group/'

LEAD: Utterances made as the adult and pupils are performing the same verbal activity under the adult's direction are coded as 'lead'. The teacher and children may be singing a song, reciting a rhyme or counting together, for example.

2. The Questioning Mode:

The Questioning Mode classifies the different types of questions teachers ask in terms of teacher intent and the pupil response expected. This category does not include comments in question form.
SIMPLE QUESTION: The teacher asks for information already known, usually in a yes/no answer.

'Have you had your juice?'
'Do you have a pencil?'
'What colour is your jumper?'

OPEN QUESTION: The teacher is putting a question to invite the expression of feelings or opinion on the part of the child. The child may develop on the question as he sees fit, and divergent responses are permissible. The utterance may be phrased in statement form as well as question form.

* The end of an episode is indicated by a slash, (/).

'What did you do over the holidays?'
'Tell me why you like that story.'
'You're going to live in a tent/ What sort of food do you think you might take?'

SOCRATIC QUESTION: The teacher questions the child with the object of helping him to solve a problem or clarifying his ideas. A series of questions can be asked sequentially to achieve this end.

'If tomorrow's the 13th what will Saturday be?'
'The chair will fall over/ and what will happen to the man?'

Socratic Sequence

T. Have you drawn your piggy?
Ch. (Points)
T. Where are his eyes?
Ch. (Points)
T. You have only drawn one eye/ How many eyes do piggies have?
Ch. One
T. How many eyes do doggies have?
Ch. Two
T. How many eyes do pussies have?
Ch. Two
T. How many eyes do cows have?'
Ch. Two
T. How many eyes do piggies have then?
Ch. One.

3. The Eliciting Mode

All utterances in this category call for a response from the child, either verbal or non-verbal. If a reply was not forthcoming, the adult would most likely re-phrase the utterance. Responses would range from a smile (in response to a greeting) to immediate and obvious modification of behaviour, (in response to a command).

COMMAND: The teacher delivers an imperative in the form of an order. utterance, although at times direct, contains no negative.

'Sit up straight'
'Put the puzzle away'
'Sit down on that side'
'Go and get the writing books, will you?'

REQUEST: The teacher delivers an imperative in the form of a question.

'Would you please close the door?'
'Will you find me something blue, please Joanne?'

RECOGNITION: This category is used for all comments, greetings, personal compliments, and alerting exclamations. These utterances are all teacher initiated.

'Hullo'
'What a nice day it is'
'You look very pretty in red Jody'
'Ooh! What can we see here?'
'My goodness'

4. The Reinforcing Mode:

These utterances are contingent upon behaviour by the child.

GENERAL PRAISE: Teacher statements of approval which do not specifically state what behaviour is being praised.

'That's nice'
'Clever boy'
'Good'

SPECIFIC PRAISE: Teacher statements of approval which name the response being praised.

'I love the way you've put the skull and bones on the sails.'
'You're a good girl for putting the blocks away'
'I like your story about your trip, Sue'

NEGATIVE: The teacher responds to incorrect work or inappropriate behaviour through disapproval or corrective feedback. The feedback is phrased in negative statements. The statement could be posed to an individual or a group of children.

'Don't run in the preschool'
'You cannot play in the doll's corner, Jane'
'You didn't cut along the line'

5. The Facilitating Mode:

These utterances promote the smooth flow of the lesson - they are the 'oil to keep the classroom engine running.'

AFFIRMATIVE: This category is used for utterances which provide feedback to the child, confirming a correct response in a 'neutral' way, (e.g. repeating a child's answer). This category is also used for undirected remarks by the teacher, (including self affirmatives, self instructions, self corrections).

'O.K.'
'All right' (undirected)
'That's it'
T: Why did you do that (Ch. explain) T: 'I see'
T: 'Which hand do you hold your crayon in?'
(Ch: 'That hand') T: 'That hand'.

RESPONSE: This category is used for responses to a child's question, need or to a situation initiated by the child.

'Well, never mind'
'Yes, you can cut around it now'
'Ch: 'I can't walk on this bar.'
T: 'I'll give you some help/ Woops! Climb up again.'

B. Function of Verbal Episodes

1. The Regulatory Function.

For all of these utterances the teacher seeks to exercise a degree of influence over the behaviour of the child.

MOTIVATE: Teacher utterances designed to arouse curiousity, stimulate interest, or encourage child to undertake, or persist in an activity.

'We are going to do special stories about red things'
'You really are cutting that so carefully, John,/good boy/'
'And when you have cut it out very well it will be your own red shape'

INSTRUCT: These are task oriented utterances aimed at facilitating organising and carrying out of tasks or activities by children, by giving directions for tasks and other activities - eg. allocating, telling what to do or how to do it.

'Then you take the scissors/ and cut around this big shape/'
'Write your name on the back of the paper'
'The "Seals" are going to play with blocks or jigsaws'

CONTROL: Utterances used by the teacher to control or manage the child's conduct are coded 'control'. The child's response may be verbal or non-verbal. This category includes a wide range o situations such as when the teacher is being permissive, e.g. giving the child a choice between a number of activities, commanding that a particular activity begin or cease, or supervising routines e.g. pack away time.

'Sit down'
'Are you going to the book area first?'
'Where do you think you might go to play after you get dressed up?'
'You might like to get one of the dolls'
'Watch me Jodie.'

2. The Heuristic Function

Liguistic Strategies which aim to examine the pupils' knowledge and competence fall within the heuristic function, which encompasses all cognitive activities in the classroom.

EVALUATE: Included in this function are all utterances designed to assess a child's competence at a verbal or non-verbal task. Teacher language served an evaluative function often requires information, or the successful manipulation of materials as a response.

'Show me how you can cut'
'What colour is the wet chalk?'
'Is there anything else you can tell me about the picture?'
'Hold up four fingers'
'Will you get me a large blue circle please, Kerry?'

KNOWLEDGE: Teacher language which aims to extend and improve the child's knowledge or understanding about the world or events are coded within the knowledge function. They can range from utterances which are purely descriptive to those which require logical operations, e.g. cause and effect and condition statements. The teacher may be providing information, or using a probe to get the child to look at what he knows in another way, and to make inferences from that. Improvement in the child's cognitive functioning is an expected outcome.

'An elephant has a really long curling nose/that picks up his dinner/ and puts it in his mouth'

'There is someone else who wears red trousers/someone who comes at Christmas time/ and says Ho,Ho,Ho'.

Socratic Sequence with a Knowledge Function

T. 'What's the sun for?'

Ch. (No response)

T. 'Where do you find stars?'

Ch. 'Sky'

T. 'Where do you see them?'

Ch. 'Night'

T. 'When does it get light?'

Ch. 'Morning'

T. 'Where do you get light?'

Ch. 'Sun'

T. 'So what's the sun for?'

3. The Social Function:

In this function, the teacher's main intent is to promote and enrich the affective climate of the classroom, by encouraging social interaction and supporting children's efforts through personal involvement and comment.

SOCIAL INTERACTION: The teacher's utterances are designed to initiate or promote social interaction and group co-operation, or to suggest how a dispute may be avoided or resolved. This category is also used for maintaining a warm and pleasant classroom climate.

'That's a pretty dress, Sue'

'Tell me all about your pet cat, Bill'

PERSONAL: Included in this function are examples of the language used in the projection of aspects of the personality of the teacher, which are relevant to the situation, e.g. the exertion of personal authority, the relation of personal anecdotes, the expression of a personal opinion, preference, interest or pleasure. This category also includes those utterances which are part of the teacher's own personal style, or a habit. eg., The teacher on completion of marking the roll says to herself 'O.K., finished.'

'I think red is a happy colour'

'I like peanut butter and honey together'

IMAGINE: Language belonging to this function has, as it's aim, the maintenance of role/fantasy play with a child or group of children. The teacher must be involved in the game, and not directing it. The teacher and children have equal status in the game.

'This is a delicious, (pretend), cup of tea. Can I pass you the sugar, (pretend)'

4. The Administrative Function.

Utterances categorised in the Administrative Function aim to expedite the completion of non-curriculum routines eg. the teacher is carrying out a routine enquiry or activity marking the roll, answers phone, reading school notes etc.

'Matthew is not here'

'Who ordered lunch?'

'Who has their zoo money?'

THE RESOURCE FUNCTION: The purpose of statements having a resource function is to inform of the availability of goods and services, or to indicate that the teacher is going to provide some service or goods - eg. prompting when assisting with reading, providing words during written expression.

'I'll show you how to trace'

'You've got a piece of paper on your table'

'The paint is over in the corner'

APPENDIX C

T.L.I. 1977

% OF OBSERVATIONS IN EACH CATEGORY
FOR EACH SITE AND AS A TOTAL

Mode

	Behaviourist	Cognitive	Competency	Contemporary	Combined
STATING					
Show	12.60	9.17	6.62	9.24	9.50
Tell	20.30	19.64	20.47	26.63	21.60
Lead	00.14	00.24	00.00	00.00	00.09
Total Stating	33.04	29.05	27.09	35.87	31.19
QUESTIONING					
Simple	9.47	7.07	12.94	13.99	10.78
Open	14.31	22.90	17.76	11.45	16.63
Socratic	1.29	2.51	1.73	00.86	1.43
Total Questioning	24.97	31.48	32.43	26.30	28.84
ELICITING					
Command	13.62	11.68	17.23	16.54	14.73
Request	00.27	1.81	00.76	1.44	1.03
Recognition	00.41	00.48	00.23	1.10	00.53
Total Eliciting	14.30	13.97	18.22	19.08	16.29
REINFORCING					
General Praise	6.00	2.67	2.18	1.76	3.28
Specific Praise	3.00	0.48	0.23	0.34	1.09
Negative	0.48	0.39	0.60	1.10	0.63
Total Reinforcing	9.48	3.54	3.01	3.20	5.00
FACILITATING					
Affirmative	17.58	19.45	18.66	14.51	17.62
Responding	00.55	1.38	00.23	1.76	00.95
Total Facilitating	18.13	21.83	18.89	16.27	18.57

APPENDIX C Continued...

T.L.I. 1977

% OF OBSERVATIONS IN EACH CATEGORY
FOR EACH SITE AND AS A TOTAL

Function

	Behaviourist	Cognitive	Competency	Contemporary	Combined
REGULATORY					
Motivating	23.78	20.56	16.93	14.93	19.28
Instructing	14.05	12.71	14.98	8.22	12.82
Control	9.81	11.53	12.34	17.98	12.71
Total Regulatory	47.64	44.80	44.25	41.13	44.81
HEURISTIC					
Evaluative	24.52	32.00	31.53	25.52	28.35
Knowledge	8.31	5.65	9.40	7.64	7.79
Total Heuristic	32.83	37.65	38.93	33.16	36.14
SOCIAL					
Social Interaction	9.40	6.20	5.79	13.83	8.70
Personal	6.26	7.60	6.78	6.96	6.88
Imagine	0.00	0.00	0.76	0.94	0.23
Total Social	15.66	13.80	13.33	21.63	16.81
ADMINISTRATE					
Total	0.00	0.55	0.00	0.17	0.17
RESOURCE					
Total	3.27	3.45	2.26	3.81	3.18